

- 24 -

**CLAIMS:**

1. A surgical fastening device for pinning a surgical filament to a body tissue, comprising:
  - (f) a grasping handle;
  - 5 (g) a slender shaft extending from the grasping handle,
  - (h) a compartment configured to contain one or more surgical fasteners ;
  - (i) an activatable ejecting mechanism ejecting a surgical fastener from the compartment ; and
  - 10 (j) a filament dispensing system configured to dispense surgical filament along the shaft so that a fastener grasps the filament when being ejected from the shaft.
2. The surgical fastening device according to Claim 1 wherein the ejecting mechanism is spring mechanism, a hydraulic mechanism or a pneumatic  
15 mechanism.
3. The surgical fastening device according to Claim 1 or Claim 2 further comprising a cutter for cutting the filament.
4. The surgical fastening device according to Claim 3 wherein the cutter comprises a blade, a hot wire, or an RF generator.
- 20 5. The surgical fastening device according to any one of the previous claims further comprising a surgical filament.
6. The surgical fastening device according to Claim 5 wherein the filament is a mesh, a ribbon, a strip, a wire, a net or a thread.
7. The surgical fastening device according to any one of the previous claims  
25 wherein the fasteners are contained in the shaft.
8. The surgical fastening device according to any one of the previous claims further comprising one or more surgical fasteners.
9. The surgical fastening device according to Claim 8 wherein the fasteners comprises a barbed prong extending from a disc.

- 25 -

10. The surgical fastening device according to Claim 9 wherein the fasteners comprise two or more barbs.
11. The surgical fastening device according to Claim 9 or Claim 10 wherein the fasteners have spring like fins extending from the disc.
- 5 12. The surgical fastening device according to any one of Claims 9 to 11 wherein the fasteners have barbed projections extending from the disc.
13. The surgical fastening device according to Claim 9 wherein the fasteners comprise a helical wire having a first barbed end and a second end attached to a propeller.
- 10 14. The surgical fastening device according to Claim 8 wherein the fasteners comprise a crown from which extend two prongs.
15. The surgical fastening device according to Claim 8 wherein the fasteners comprise a socket configured to receive a rotatable driving rod.
16. The surgical fastening device according to Claim 7 further comprising one  
15 or more surgical fasteners in the shaft.
17. The surgical fastening device according to Claim 16 wherein the fastener has a ring portion from which extend two barbed prongs.
18. The surgical fastening device according to Claim 16 wherein the fastener has an unconstrained configuration in which the prongs curve outwards from the  
20 ring portion and a constrained state in which the prongs are straight and parallel to a longitudinal axis of the ring portion.
19. The surgical fastening device according to Claim 18 wherein the fasteners are maintained in the constrained state in the shaft.
20. The surgical fastening device according to any one of the previous claims  
25 wherein a fastener is pinched so as to grasp the filament when being ejected from the shaft.
21. The surgical fastening device according to any one of claims 1 to 20 wherein a fastener pierces the filament when being ejected from the shaft.

- 26 -

22. The surgical fastening device according to any one of Claims 1 to 20 wherein a fastener passes through a hole in the filament when being ejected from the shaft.
23. The surgical fastening device according to any one of Claims 1 to 20  
5 wherein notches are formed along edges of the filament and prongs of a fastener enter the notches when being ejected from the shaft.
24. The surgical fastening device according to any one of the previous claims wherein the filament has spaced apart bulges.
25. The surgical fastening device according to Claim 7 further comprising a  
10 ratchet mechanism preventing movement of fasteners in the shaft towards the grasping handle.
26. The surgical fastening device according to any one of the previous claims wherein the ejecting mechanism is located in the grasping handle.
27. The surgical fastening device according to Claim 1 configured to screw a  
15 fastener into a body tissue.
28. A surgical fastener for use in the surgical fastening device according to any one of the previous claims.
29. The surgical fastener according to Claim 27 formed from a biodegradable material.
- 20 30. The surgical according to Claim 27 or 28 formed from stainless steel or Nitinol™.
31. A surgical filament for use in the surgical fastening device according to any one of Claims 1 to 24.
32. The surgical filament according to Claim 30 made from a biodegradable  
25 material.
33. Use of a surgical fastening device according to any one of Claims 1 to 27 for attaching a surgical filament to a body tissue.
34. The surgical fastening device according to any one of Claims 1 to 27 for use in attaching a surgical filament to a body tissue.

- 27 -

35. A method for pinning a surgical filament to a first location of body tissue in a body cavity comprising introducing into the body cavity a surgical fastening device according to any one of Claims 1 to 27 into the cavity and ejecting a first surgical fastener from the shaft so as to pin a surgical filament to the first  
5 location.

36. The method according to Claim 35 further comprising ejecting a second surgical fastener from the shaft so as to pin the filament to a second location of body tissue in the cavity.

37. The method according to Claim 36 wherein the filament is stretched taut  
10 between the first and second locations before the second fastener is ejected.

38. The method according to Claim 37 for use in the treatment of stress incontinence, inguinal hernia, pelvic organ prolapse, gastroesophageal reflux, laproscopic anastomoses of a tubular organ, and repair of ureteropelvic obstruction.